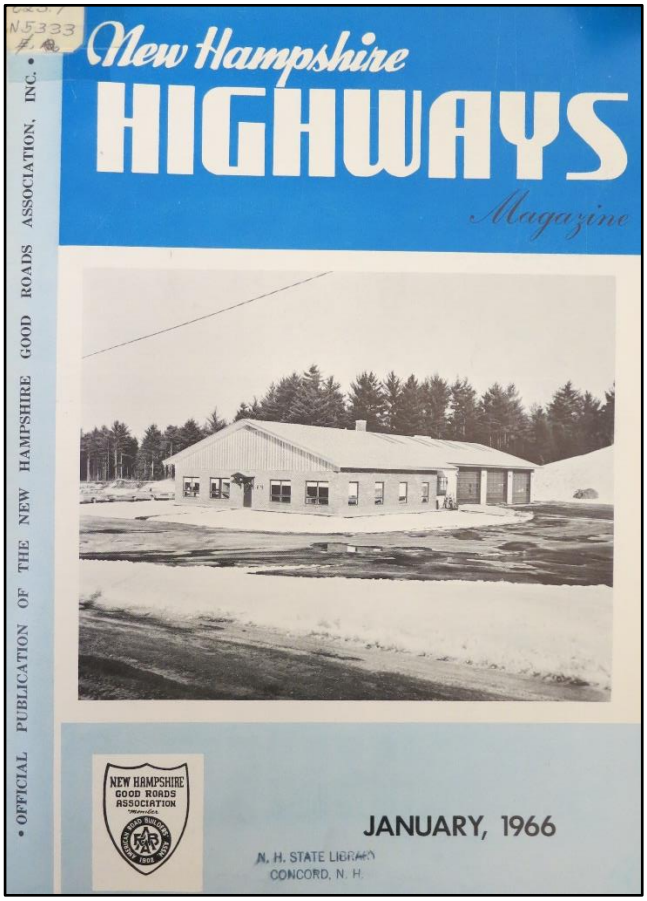
NHDOT Maintenance Facilities Historic Context



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Historic Context: NHDOT Maintenance Facilities

ABSTRACT

The need for a statewide system of road maintenance in New Hampshire dates back to the early 20th century when the increased popularity of the automobile began to impact what were then dirt and gravel roads. The patrol system of maintenance was inaugurated in 1912 with eight divisions and the patrolmen in each division typically kept their wagons and equipment at home. In time, the State began to rent or acquire older buildings and eventually built new structures specifically designed for the purpose of storing vehicles, materials, and equipment. The maintenance buildings were typically of modest, utilitarian construction reminiscent of barns and farm outbuildings. They were almost always erected and altered by state employees as time, funding and duties permitted.

This document provides an historic overview of the development and evolution of maintenance facilities in New Hampshire owned and constructed by the New Hampshire Public Works and Highways/Department of Transportation from the early 20th century to the present. As part of that history, it will briefly look at the events and influences that contributed to the development of the facilities. Over the years, the number of districts and the boundaries of the districts have been modified several times and the locations of patrol sheds have changed. Building needs have also changed as it became necessary to store new materials while protecting environmental details. Increases in the number of pieces of equipment and the sizes of that equipment have also necessitated alterations to existing buildings and new buildings.

Today, the state of New Hampshire is divided into six transportation districts, and each district has 14-19 maintenance facilities. These districts provide year-round maintenance for approximately 8,710 lane miles (excluding turnpikes). This includes winter snow and ice control, guardrail repair, mowing, road patching, litter pickup, removal of highway debris/road hazards, maintenance of drainage systems, Night patrols during the winter months, and assistance during state emergencies and at accident scenes. As the number of personnel has increased, this has also resulted in changes in facilities to provide safe and comfortable work places for crewmembers.

The purpose of this context document is to take a comprehensive look at these facilities in order to be able to compare them, determine integrity, and inform future planning.

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Cover Illustration: New office building with attached patrol quarters opened in December 1965 for Maintenance Division 7 of the New Hampshire Department of Public Works and Highways in Swanzey. Source: *New Hampshire Highways*, January 1966.

METHODS AND PURPOSE

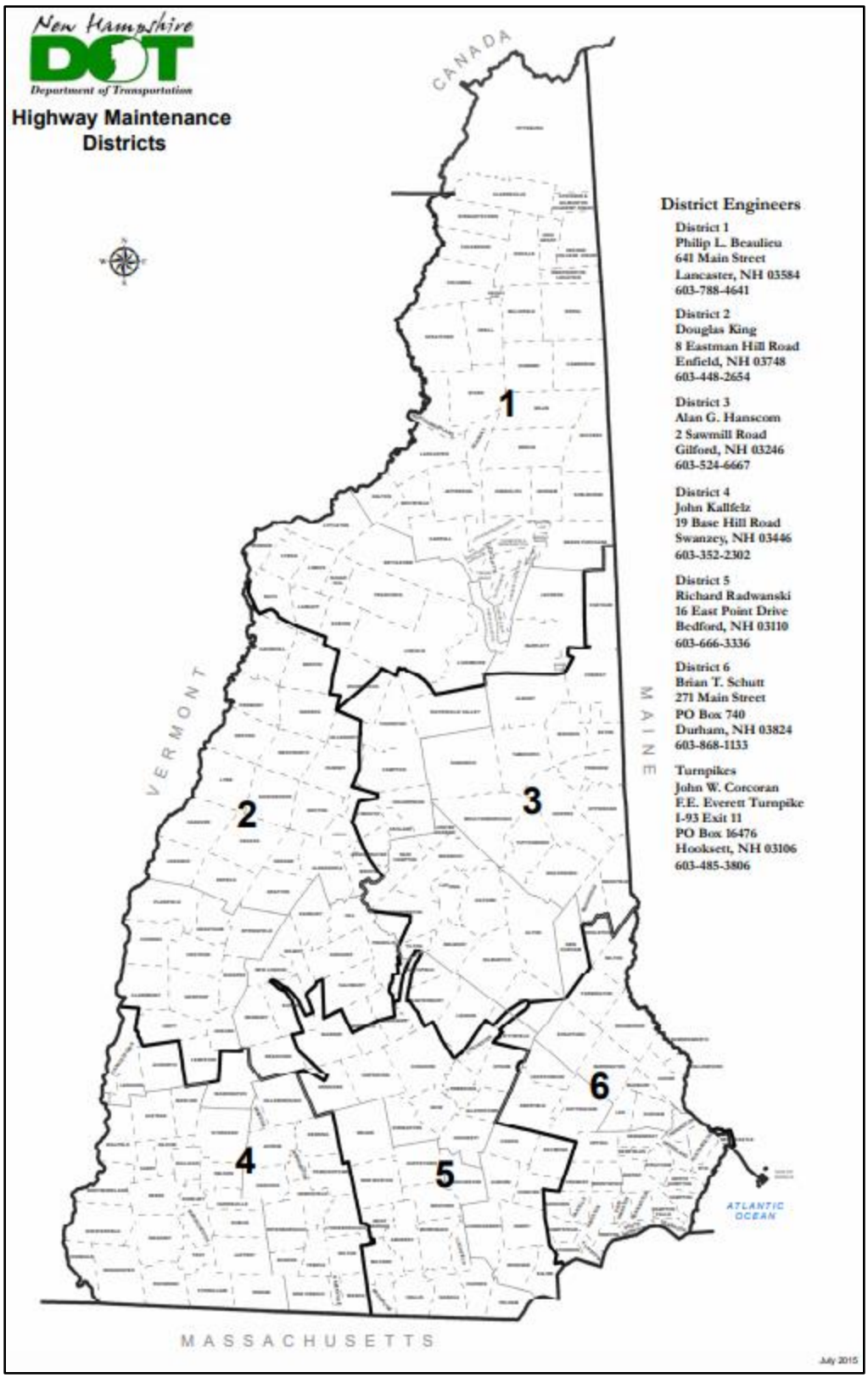
This context document focuses primarily on NHDOT-owned maintenance facilities (not including Turnpike facilities) that were built before and including 1970. It is intended to provide information on existing maintenance facilities and inform discussions when the Department looks to upgrade or replace existing buildings in the future.

To date, very few inventory forms have been prepared for DOT patrol shed properties. In 2004 the District 5 shed in Chester was inventoried (CHE0003) and was found to be ineligible for the National Register.[1] In 2016 an inventory form was prepared for Salem 514 (SAL0063).[2] That facility which included three historic buildings dating to the 1950s was determined eligible for the National Register. This context document was prepared as mitigation for the planned replacement of the existing Salem buildings with updated amenities.

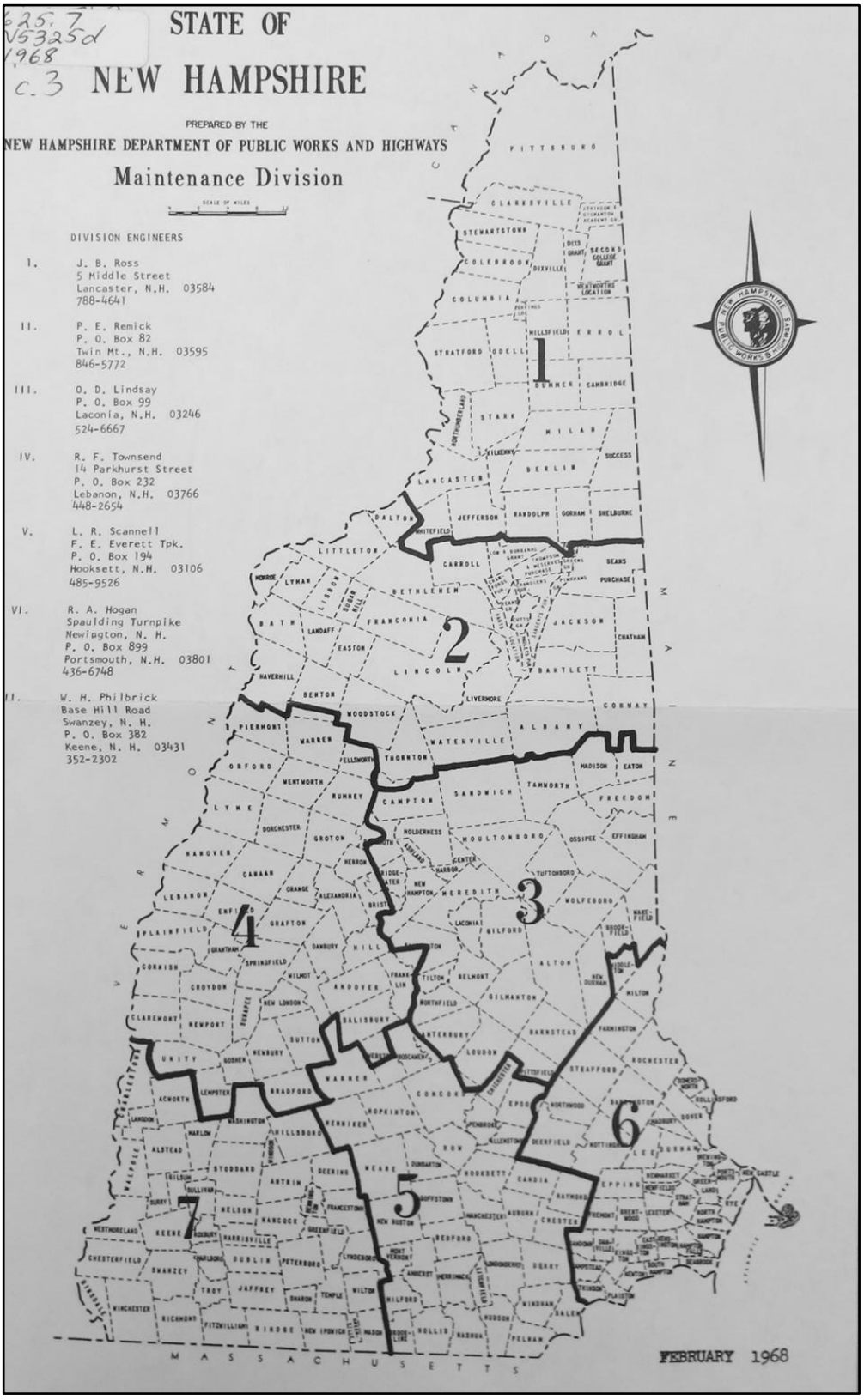
The report draws on a wide variety of source material including annual reports of the Department of Public Works and Highways, information contained in State and District files and in publications such as *New Hampshire Highways Magazine,* the official publication of the New Hampshire Good Roads Association, Inc. The NHDOT Inventory of Managed Properties (IMP) database provided information on and photographs of many district patrol sheds and other buildings (past and present). The preparation of this context also involved file research at each of the six District offices (Lancaster, Enfield, Gilford, Swanzey, Bedford, and Durham) as well as limited field checking.

It should be noted that few other states appear to have embarked on similar contexts for their utilitarian maintenance buildings contexts to date. The Indiana Department of Transportation conducted a Historic Survey and National Register Evaluation of the Department's District Garages in 2008 that was helpful in the preparation of this document.

[1] Joyce McKay, NHDOT, Individual inventory for Chester 513 (CHE0003), 2004.
[2] Kaitlin O'Shea and Nichole Benjamin-Ma, VHB, Individual inventory form for Salem 514 (SAL0063), 2016.



Present Day Map of NH Highway Maintenance Districts



Map of NH Highway Maintenance Districts in 1968

HISTORIC BACKGROUND

The beginnings of what is now the New Hampshire Department of Transportation can be traced back to 1903 when the New Hampshire State Legislature established the office of State Engineer. Two years later, New Hampshire's first State Aid highway law was passed requiring towns to make annual appropriations for permanent highway improvements based on their assessed valuation, authorizing towns to raise additional highway funds that could be used as "match" for state funding and authorizing the state to appropriate funds to match the local appropriations. The legislation also designated certain roads as "state highways". Prior to this date all highway improvements had been limited by local City and Town appropriations and, in limited cases, to special acts of the legislature designating certain lake, mountain and shore roads as State Highways.

In 1907 there were 1,749 total automobiles registered in the state of New Hampshire.[3] This number did not include out-of-state visitors using the state's roads. From 1905 to 1910, the motor traffic was light but from 1909 to 1912 traffic increased and it became evident that some provision for maintenance also had to be made. The advent of the fast-moving automobile and the heavy motor truck created different wear on gravel roads than the horse-drawn vehicle with its iron tires.[4] In 1911 a motor vehicle law passed, making the net income from motor vehicle fees available for highway improvements, with two-thirds to be expended for state highway improvements and maintenance and the remainder to towns to maintain and support state aid roads. [5] The proceeds of automobile licenses became the funding mechanism for the maintenance of 1,026 miles of State Aid Roads.[6]

The Patrol System of Maintenance

Following the lead of other states, in 1912 New Hampshire inaugurated the patrol system of maintenance.[7] The state was divided into eight divisions, each division being in charge of a Division Engineer who was directly responsible to the State Highway Commissioner.[8] The Division Engineer was in charge of all maintenance in his district and serving under him was a maintenance foreman and patrolmen. Patrolmen were selected by the Division Engineer and their appointments were approved by the Commissioner. As stated in a 1917 article, "The patrolmen are chosen with regard to their ability and fitness for this work and without regard to

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[3] First Annual Report of the Secretary of State for the Year Ending August 31, 1907. Concord: 1907.

[4] Clarence M. Brooks, "New Hampshire's Patrol System for Gravel Road Maintenance", *American City*, vol. 17, 1917, p. 119. The author, Clarence Morrison Brooks (1881-1944), was a District Engineer for over 25 years, working initially in Keene and for many years in Franconia. He was born in Charlestown, NH and attended West Point in 1902. He attained the rank of Captain in the 322 Engineers, 97th Division. He later retired to Kissimmee, Florida and died in February 1944 while at Key West doing war work.

[5] *Granite Monthly*, April 1920. Trunk Line or Cross State Highways were those main lines that were designated and laid out by the Highway Department and are constructed and maintained jointly by the State and Towns.

[6] 1913-1914 Biennial Report, p. 4.

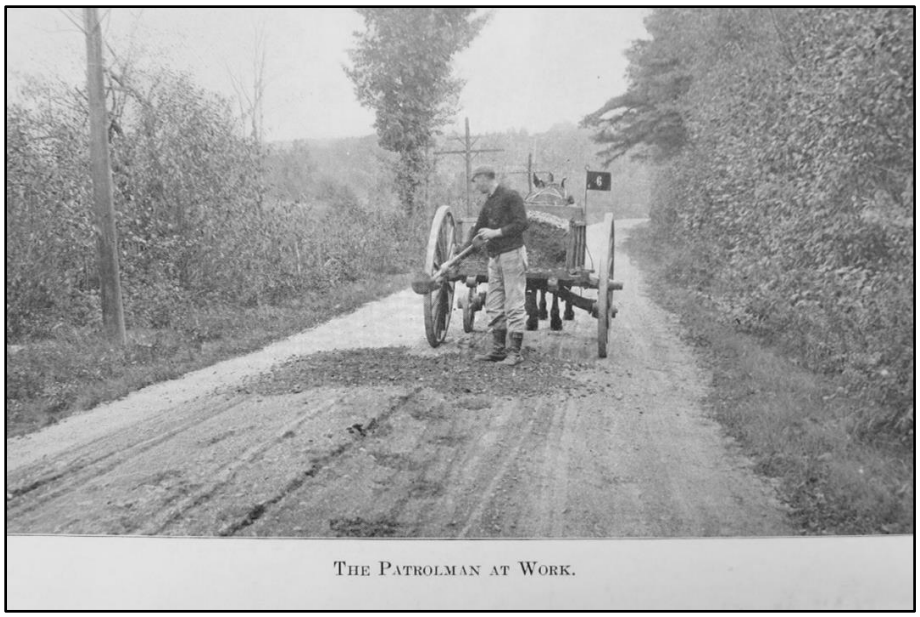
[7] Other states using the patrol system at this time included New York, Pennsylvania, Maine, Vermont, Rhode Island, Connecticut, New Jersey and Maryland.

[8] The State Highway Department and State Highway Commissioner was established in 1915, replacing the office of State Engineer. Frederic Elwin Everett was appointed to the new post of New Hampshire Commissioner by Gov. Rolland H. Spaulding. F.E. Everett (1876-1951) was a 1900 graduate of M.I.T. and had joined the department as an engineer in 1906. Everett served as NH Highway Commissioner from 1915 to 1949.

their politics, and all appointments are made for an indefinite period and remain in force until resigned by the patrolmen or revoked by the Division Engineer".[9] Each patrolman was in charge of a section of road ranging from roughly four to six miles in length, depending on the volume of traffic and location and condition of the road.

A patrolman was expected to patrol his entire section once a week, generally on Saturday, using the rest of his time where most needed, so to spend as little time as possible in traveling over the road. All patrol sections were inspected at least once every ten days by the Division Engineer or the maintenance foreman.[10]

In New Hampshire, patrolmen were expected to provide their own horse, dumpcart, shovel, pick, hoe, rake, stone-hook, axe, iron bar, iron chain and tamp.[11] As seen in the photo below, every patrolman was provided by the State Highway Department with two cart signs with his number painted on them. He was also provided with a staff having a sign on top. When he had to leave his section of road to go to a gravel pit or some other reason, he was to leave his staff in an upright position beside the road at the point where he left it, so that he could be found if necessary.[12]



THE PATROLMAN AT WORK.

Source: *NH Highways*, US Dept of Agriculture, 1912

Patrolmen worked a six-day, 54-hour week (Sundays and legal holidays excepted) from the time the snow melted (around April 1) until the ground froze in the fall (typically December 1).[13] One of the most important maintenance chores was dragging, done early in the spring when the frost was coming out of the surface and the road was drying out. Dragging continued in the summer months as often as possible and when not dragging, the patrolman added new gravel and filled

[9] Brooks 1917: 119.

[10] Brooks 1917: 121.

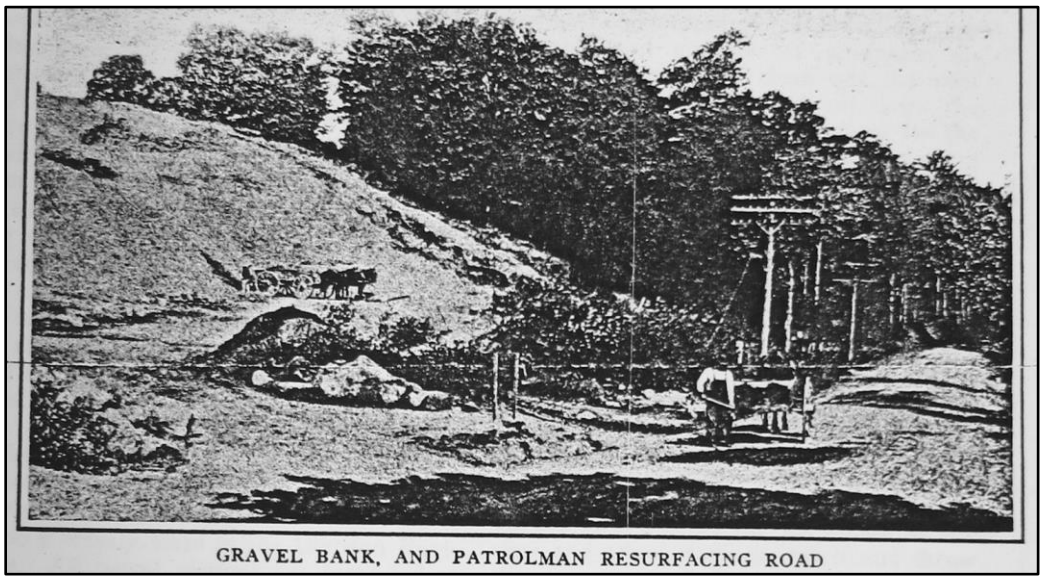
[11] Maine also required patrolmen to furnish their own equipment. In most other cases, the State provided the equipment. See William A. Bassett, "Problems of Highway Administration", *Municipal Research*, April 1917, p. 166.

[12] "Gravel Roads of New Hampshire: Patrol Maintenance", *The Highway Magazine*, 1915, p. 11.

[13] Brooks 1917.

depressions. Rainy days were especially important days to patch holes, drag and attend to storm water issues. In addition to monitoring road surface conditions and filling potholes the patrolmen were to "keep all culverts, ditches and waterways open and free from obstructions, all loose stone and rubbish removed from the road, guard-rails safe and painted, and the brush and vegetable growth cut from beside the road and on the inside of all curves".[14] Once every two or three years the maintenance foreman would use a grader on the gravel roads. In 1917 patrolmen received $3.35 to $3.50 a day for their first year; their pay increased according to length of service.[15] It was estimated that the gravel roads on the trunk lines were being maintained, including all work on the surface, drainage and protective structures, at a cost of $250 to $300 per mile and on the state aid or non-trunk lines from about $100 to $200 per mile.[16] Between 1912 and 1915 the total appropriations for road maintenance averaged about $250,000 per year with which the Highway Department improved and maintained about 1,000 miles of gravel roads.[17]

A patrolman often spread from one to two hundred loads of new gravel per mile of road during a season. He hauled the gravel from a nearby gravel pit using his own horse.



GRAVEL BANK, AND PATROLMAN RESURFACING ROAD

Source: *The American City*, August 1917, p. 120

When the gravel pits were located too far from the section for the patrolman to economically haul the material himself, the Department would haul a supply either with sleds during the winter

[14] State of New Hampshire Highway Department, *Handbook of Instructions and Regulations for the Use of the State Road Patrolmen*, 1916
[15] Brooks 1917: 120
[16] Ibid.
[17] "Gravel Roads of New Hampshire: Patrol Maintenance", *The Highway Magazine*, 1915.

or by motor truck during the summer and leave it in piles along the road where the patrolman could access it curing the season.[18]

Source: *The American City*, 1917, p. 121

The state continued to lay out new miles of highway each year but as stated in a 1920 Department Report, "Maintenance has become the most important work of the Department".[19] According to a 1917 article there were various advantages of the patrol system. "Even if a man is not constantly employed on the surface work, he becomes familiar with the peculiarities of his section and with the best way to treat them, and he soon learns to take a pride in his road. It is impossible to expect the same skill and industry from men employed by the job. Personal pride in his job will make a man do far more than mere wages."[20] In 1915, the New Hampshire force of patrolmen averaged 225 men. By 1925 there were 276 state patrolmen monitoring and repairing state roads.

By 1920 the maintenance demands exceeded the funding available through taxes and an appropriation for maintenance was established. In particular, the destructive effect of increasing truck traffic was noted. Beginning in 1924 all state funds for the construction and maintenance of the state, state aid and trunk line highways came from the motor vehicle fees and a gasoline road tax.

In the early 1920s, the patrolman continued to work out of his own house, storing his cart, horse and basic tools in a barn or outbuilding. In addition to the patrolmen there were other workers including common laborers who did repairs – ranging in number from 826 in November to 2,096 in June, teams with drivers – 660 in June and 951 in June as well as trucks with drivers (101 in November and up to 311 in June), all of which were overseen by a Division Engineer. There

[18] Brooks 1917: 121
[19] 1919-1920 Biennial Report, p. 11.
[20] Brooks 1917: 161.

were ten divisions in 1924. Some of these appear to have had local offices (Lancaster, Lakeport, Keene, Northwood Narrows, and Dover) but in other cases, engineers assigned to the divisions worked out of Concord.

The gravel highways had to be treated with bituminous materials in order to eliminate dust, mud, and ruts. During 1924 over 800 miles of state highways were treated with bituminous applications such as "Tarvia".[21] Other maintenance operations included the surface application of oil and scarifying. Reinforced concrete roads and bituminous macadam surfaces remained the exception, not the rule.

Section of State Highway in Rumney receiving Tarvia treatment in 1924
Source: *New Hampshire Highways*, October 1925.

Although communities in the state had begun to clear snow from the roads in the 1905-1915 period, the State first became actively engaged in snow removal in the winter of 1925-1926. That year the Legislature appropriated $36,700 to plow 620 miles of recently designated trunk lines with costs to be shared 50/50 between the State and the communities through which the roads passed. The law also stipulated that four inches of snow was to remain on the roadway for sleigh travel but this part of the legislation was soon amended. During the winter of 1926-1927 the amount of plowed mileage almost doubled.[22] In 1927 the Governor and Council approved State Highway Commissioner Everett's recommendation to keep Franconia Notch open to winter traffic. In 1929-1930 the other two notches, Crawford and Pinkham, were opened as well. The ability to keep the White Mountain highways open to winter traffic was key to growing the state's winter sports industry.

[21] Tarvia was a trademarked viscid road surfacing and bonding material made from coal tar. *New Hampshire Highways*, October 1925.
[22] Stephen Gray, "History of Winter Maintenance in New Hampshire", Road Business, Winter 2019, Vol 34, No. 1.

The State's commitment to snow removal meant the need for more equipment and appropriate buildings. In 1928 the State recommended that all plowing equipment be housed in warm storage whenever possible, resulting in needs for additional storage. Towns were also encouraged to purchase snow equipment because the State could not shoulder the burden of snow removal alone.[23] The first trucks purchased by the State for the Divisions date to about 1926.[24]

Early State Patrol Shed Facilities

After the Depression, local communities found it difficult to meet the financial burden of their share of the cost of maintenance and reconstruction of trunk lines and state-aided highways. The State Legislature relieved the towns of these highway expenses by directing the State Highway Department to take over maintenance and reconstruction facilities, and also assisted local communities by providing funds for the improvement of rural post roads and township roads.[25] This was apparently the stimulus for the acquisition of the earliest maintenance facilities.

In the early days, the locations of maintenance facilities within the district divisions were rarely the result of pre-planning. Facilities were located where the State had land, could rent an existing building or could acquire land and/or a building easily from a private party or governmental body. There was little or no consideration for proximity to water sources or groundwater which would later prove problematic in many cases. The simple goal was to spread out coverage in a given area but there were no specifics or guidance on how exactly to do that.

It appears that the first attempts at locating patrol sheds occurred in the 1930s. Review of State Highway reports does not reveal any appropriation or other clue. Deed records indicate that the State of New Hampshire acquired small parcels of land in a number of communities in the 1930s. Among the early known purchases are Haverhill (1935 & 1938), Warren (1937), Canaan (1942), Sunapee (1936),

In many cases the properties that were purchased by the state initially already had one or more structures that could quickly be put to use as a garage or storage building. For example, in Exeter, the State Public Works & Highways purchased the Charter Street Garage in 1937 from Socony-Vacuum Oil. An additional parcel of adjacent land was sold by Gardner Gilman in 1941. This served as the 609 Patrol Shed for many years. In 1938 the State purchased White's Garage on the east side of Rt. 10 in Blackmount Village for use as a patrol shed. It was sold to a private party in 1977. The Lone Star Garage on Dover Point Road in Dover was bought by the State in 1938 and was used for Patrol Shed 606.

[23] *New Hampshire Highways*, December 1928.
[24] Information from Robert Hogan, State Maintenance Engineer from 1970-1996, March 2018.
[25] State of New Hampshire First Biennial Report of the State Planning and Development Commission, 1936-7, p. 64.

Former Lone Star Garage in Dover (later Patrol Shed 606) purchased in 1938 (file photo)

Franklin 211 (file photo)

Preexisting barn used as patrol shed since the 1950s with 40’ x 40’ addition at rear dating to 1982

There also appear to be a few cases where buildings were constructed especially for use as patrol sheds in the late 1930s and 1940s.

In Sunapee, the State purchased a 1.08 acre lot of land from Mott Wiggins in 1936 and this building was likely built soon thereafter.

Sunapee 213 (c.1940) (current view)

Nearby in New London, Esther Whittemore sold the State a parcel of land in 1941 and the original 24' x 60' gable-roofed building was constructed soon after. The two truck bays at the rear were added in 1977. Another addition, measuring 8' x 60', was built in 1983 to be used for the crew.

New London 214 (1942 with later additions) (current view)

Winter Maintenance in the North Country

In the late 1930s New Hampshire's Night Notch Patrol and Night Weather Patrol was quite innovative and put the state's "maintenance men in the front ranks of snow fighters". The elaborate system was established by then Division (2) Engineer Clarence M. Brooks to keep the main roads in the north country open all winter. Although it was first introduced in the northern part of the state, it was soon adopted statewide and other states including Vermont followed New Hampshire's lead. The system was publicized in a series of publications including a frontpage article in the November 1939 issue of *New England Construction* magazine and *The Highway* magazine as well as various newspapers. The two magazine articles include various photographs taken by George Tuttle, a Division 2 employee.[26]

Due to the extreme winter weather conditions in the mountainous northern part of the state, the State Highway Department established year-round camps in Franconia, Crawford and Pinkham Notches to facilitate winter snow removal. Typically, the dwellings were occupied by a husband and wife. During the winter, a second man stayed in a separate cabin to assist in spreading salt and sand. In addition to snow clearing, the patrolmen from the state road camps were required to make a trip through each notch every hour during the nights that the temperatures were below 0 degrees Fahrenheit. This group was known as the Night Notch Patrol.

Rotary Plow in the White Mountains
Source: *New England Construction*, November 1939 (cover)
[District 1 files]

[26] District 1, Lancaster, has a scrapbook with excerpts of these articles which all appear to have been published in 1939 or 1940.

Each fall, preparation began for the onset of winter including outfitting all trucks for sanding and plowing including proper lights and auxiliary lighting. Snow fences were erected beside roads in unprotected areas and some 15,000 yards, equivalent to 22,500 tons of sand were stockpiled for the 18 patrolmen throughout the division (then designated Division 2). The sand was taken in October from Division sandpits by truck and piled along the highways at strategic points to be spread on the roads when slippery conditions warranted. The process of moving 22,500 tons of sand into piles required approximately 11,000 truck trips. If possible, the sand was under cover; otherwise the piles were covered with tar paper, held together by wooden strips. The winter preparations included the placement of "Snow Boards" four or five inches wide, five or six feet high, painted black and yellow and placed on the roadsides to warn snow-plow drivers of hidden obstructions such as culverts or ditches.[27]

Lyman Brooks, State Highway Night Patrol, 1939
Source: District 1 files

The Night Patrol was initiated in February 1938. Operating between the hours of 8 pm and 5 am, the four individual units, each with two men, covered approximately 50 miles of state road or every mile of the main highways of Division 2 twice each night. As summarized in an unidentified newspaper: "Each section has a patrolman on the front of whose automobile is a

[27] Unidentified newspaper clipping in scrapbook at District 1 offices, Lancaster.

six-inch light with the letters SHD on a blue lens. For equipment the automobile carries an outside thermometer, a box of sand, a shovel, a tow rope, an axe, a can of gasoline, a quart can of motor oil and a Red Cross first aid kit". Based on temperature and wind readings, important weather changes were relayed to Division Engineer Clarence M. Brooks at Franconia. Once two inches of snow had fallen, the plows were sent out and a member of the office personnel reported to the division office. Telephone control stations were located every eight to ten miles on the plowing sections and generally consisted of the homes or establishments of interested residents who were willing to cooperate with the department.

In the case of stranded motorists, if temporary aid was not enough, the occupants of a disabled car would be taken to the nearest road camp where they could rest and telephone for further assistance. During the winter of 1938-1939 the night patrol was out 37 nights between November 12 and March 23 and assisted 19 stranded motorists.

Caption: The patrol stops at a state road camp and tells the motorist he will find warmth, a telephone pay station, and a place to rest while waiting

Source: *New England Construction*, November 1939

As late as 1970, there were still two camps and a patrol headquarters at Pinkham Notch, standing on land that the State leased from the U.S. Forest Service.

One 1940 article provides additional information on the resources available for snow removal statewide during this period, noting that there were "282 trucks, 295 snow plows, tools, sanders and 220,000 tons of sand. The State owned all the plows and the wings, from seven to 14 feet in length, attached to every truck for throwing the snow back after the road has been cleared. The State owns the 34 largest trucks that are used; the remaining 248 are hired with the understanding that the highway department has first call on them, day or night."[28]

[28] Unidentified newspaper clipping, Scrapbook, District 1, Lancaster.

Introduction of Salt

Putting salt on the roads to lessen the buildup of snow and ice began in this country in the 1930s. By the late 1930s, chlorides were being mixed with sand in New Hampshire, not for their effect on ice or compacted snow, but to keep the sand from freezing solid while still in the piles.[29]

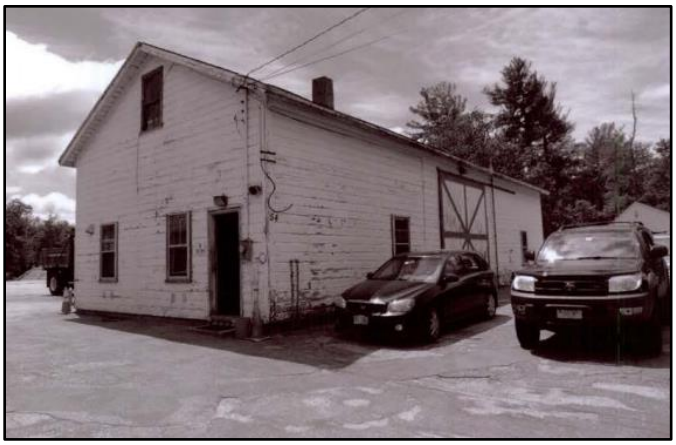
During the winter of 1941-1942, New Hampshire became the first state to adopt a general policy of using salt.[30] New Hampshire pioneered applying straight salt at the beginning of a storm as opposed to the previous practice of plowing and then treating the roads with sand. New Hampshire State Maintenance Engineers worked with salt producers to develop a coarse grain salt that, when applied to the road, would create a long-lasting brine and prevented the hard pack common with sand. New Hampshire also developed a way to spread the salt by welding steel tubes onto the truck bodies directly in front of the rear tires, later using fertilizer spreaders attached to the tailgate in some cases.[31]

There is no indication in state records as to when the first salt sheds were constructed in the districts although soon they became a standard fixture in maintenance complexes or standing on separate lots along roads at strategic points where needed for distribution.

[29]Unidentified newspaper clipping, Scrapbook, District 1, Lancaster.
[30] NCHRP Synthesis of Highway Practice 24: Minimizing Deicing Chemical Use. Washington, D.C.: Transportation Research Board, 1974, 2.
[31] Gray, "History of Winter Maintenance in New Hampshire", 2019.

Post-World War II

In the post-World War II period, the care and maintenance of New Hampshire's roads is an important component in the State's growth and development. The Department of Public Works and Highways utilized a variety of strategies to meet these needs. In Salem, the State of New Hampshire purchased a 12.5-acre parcel of land in November 1943 although it was not until after the war that construction of a maintenance facility began. By 1952 there were two buildings, an office/garage and garage on the newly-graded property with a salt shed constructed soon after.[32] The modest utilitarian buildings displayed elements reminiscent of traditional barns and outbuildings in New Hampshire. It is assumed that the buildings were constructed by State crews.



Salem 514

Source: O'Shea and Benjamin-Ma, 2016

Salem was one of the few examples found of an entire maintenance complex being constructed at the same time and surviving relatively intact without replacement.

[32] Kaitlin O'Shea and Nichole Benjamin-Ma, VHB, Individual inventory form for Salem 514 (SAL0063), 2016.

The amount of equipment being used also had an impact on budgets and facilities. During the 1950s the number of state-owned patrol trucks assigned and in use increased. In June 1953 there were 68 in use with the Division Engineers deciding who got them. As of July 1953 ten more trucks were ordered, bringing the total to 78 trucks for 103 patrolmen. It was estimated that the remaining 25 patrolmen would get state owned equipment in the next two or three years. These patrolmen likely owned their own trucks and were paid by contract rental agreements. The state trucks were fully equipped costing the department $4,400 to put on the road. This price included the truck, body, hydraulically operated plow, wing and other accessories ordered by the maintenance division. The trucks were operated for three years or 6,000 hours, whichever came first, before being traded. The dump bodies represented a sizeable share of the initial investment and were routinely transferred to replacement trucks at least once, if not twice, thus increasing the life of the dump bodies for 6 to 9 years.[33]

In 1955 extensive revisions were made to the organization of the patrol sheds, changing the number of divisions of the department from ten (as had existed since the 1920s) to seven. In order to equalize the workload on all seven divisions, minor changes were made by shifting towns from one division to another.[34]

Unlike Salem 514 which saw the construction of a new facility, many patrol sheds continued to operate out of leased buildings and land into the 1950s and 1960s. Rents were often quite nominal and arrangements continued for decades. In the 1950s District 4 was renting properties from about a dozen owners primarily for salt storage. In District 6 seven of the patrol headquarters were not on State-owned land in 1960. It was also common to pay rent directly to the patrolmen or their families. In Newmarket the Division rented from Patrolman Lloyd Walker's mother from 1932 into the 1970s. For the first ten years or so no rent was paid. Beginning in the 1940s the state paid $200 per year until 1976.[35] Epping 608 paid rent to Patrolman M.J. Beauchesne for many years; the rent was $10/month in 1951. A new facility was not built until 1968 when the patrolman announced his retirement.

In North Hampton, the State paid Patrolman Earl Spear rent to utilize a garage on his property at 216 Atlantic Avenue, across from the Town Library.[36]

[33] Information from Robert Hogan, State Maintenance Engineer, 1970-1996, March 2018.
[34] "Maintenance Division Changes", *New Hampshire Highways*, June 1955, p. 7.
[35] District 3 files. Letter from Leon Kenison, May 24, 1976.
[36] Information from District 4 and District 6 files.

Former Spear property in North Hampton (Googlemaps).
State used garage at left for patrol shed.

In 1961, District 3 had seven patrol headquarters that were not capable of housing tools and providing a heated room for the crew and other buildings were small and lacked sanitary facilities. At Sandwich 301, the room used for the headquarters was also used for salt storage. As a result, the stored tools rusted excessively. It was also not possible to heat the building sufficiently to dry clothing. At Center Harbor 305 the room was too small for tool storage or to dry clothing and tools were being stored in an old bob house. Meredith 309 also stored its tools in an old bob house. The building used for headquarters was only rented for six months a year. At Effingham 303 the crew had partitioned off a small room and installed a stove but the room had no windows or other means of ventilation. At Tamworth 302 the crew had built a small 8' x 12' building from material picked up or donated. There was no toilet and the building was set on private land. The Wolfeboro 311 patrol headquarters was 6' x 10', constructed of old 2 x 6's removed from guard rails and covered with tar paper.[37]

Conditions were also rugged at District 6 in 1963. Of the 15 patrol headquarters, only six had toilet facilities and 8 were without water. Most of the sheds were heated by wood or coal.

Sometimes, pre-existing buildings were purchased and put to new uses as patrol sheds or salt storage. In Strafford, the old Town Hall was purchased by the State in 1960. Soon thereafter, a cut was made in the side wall for a 12' overhead door, the wooden floor was removed and the interior of the building was filled with gravel three feet deep. The building was recently demolished.

[37] District 3 files, June 21, 1961 Summary of facilities.

Former Strafford Town House converted to Maintenance Use in 1960 (file photo)

Railroad buildings also were repurposed to serve patrol facilities. The former Sandown Depot on Rt. 121A was constructed in 1874 by the Nashua and Rochester Railroad but served as Patrol Shed 615 beginning in the 1930s. In later years it housed one patrol truck, tools, plows, and a spreader body. It was released to the Town in 1977 and was listed on the National Register of Historic Places in 1986 and now houses a local history museum. Alton and New Durham also used old railroad buildings for storage. In Bartlett, the former Maine Central Railroad roundhouse was leased by the State and used to store salt from about 1960 to 1981.[38]

Several World War II era steel Quonset huts were later used as maintenance buildings in districts. The Quonset huts which once stood in Andover (one semi circular and one with straight sides) and Pittsfield have been demolished. In Allenstown, half of a Quonset hut is still used as a storage building with a salt shed attached to the rear.

Allenstown 506 Quonset (current view)

[38] The Bartlett Roundhouse was listed on the National Register of Historic Places in 2015.

In 1961 seven steel Quonset buildings with square sides were relocated from Fort Dearborn in Rye to serve as maintenance buildings. Five 20' x 96' buildings were converted to Patrol Headquarters at Seabrook, Hancock, Tamworth, Moultonborough and Gilford. Three additional 20' x 48' buildings were removed and reassembled with 1 ½ of the buildings located at Tilton 313 and 1 ½ of the buildings moved to Tamworth (each 20' x 72'). The only Fort Dearborn buildings that survive today are found in Hancock, Moultonborough and Tilton.[39]

The photos below show the Hancock building on its original site at Fort Dearborn and as reassembled in Hancock in 1962.

Quonset barracks building at Fort Dearborn (left) and as reassembled in Hancock in 1962
Source: Division 4 files

[39] According to Gary Clifford of District 5, the Quonset at Gilford (Old 310) was moved to Moultonborough 305 which already had a Quonset. Today, there is only one Quonset at Moultonborough. The Tilton Quonset is located adjacent to the Park and Ride on Rt. 3 and is used for storage.

As seen in the two extant examples in Hancock and Moultonborough, the buildings are sheathed in corrugated metal siding with novelty siding on the ends.

Hancock 408 Storage (current view)

Moultonborough 305 (current view)

Other examples of reusing buildings include the District 3 headquarters at Gilford. About 1960 the State began renting a single-story concrete block and wood building (possibly a former garage) from Donald York. The building was later purchased by the State and in 1987 an addition was constructed, utilizing in-house design.

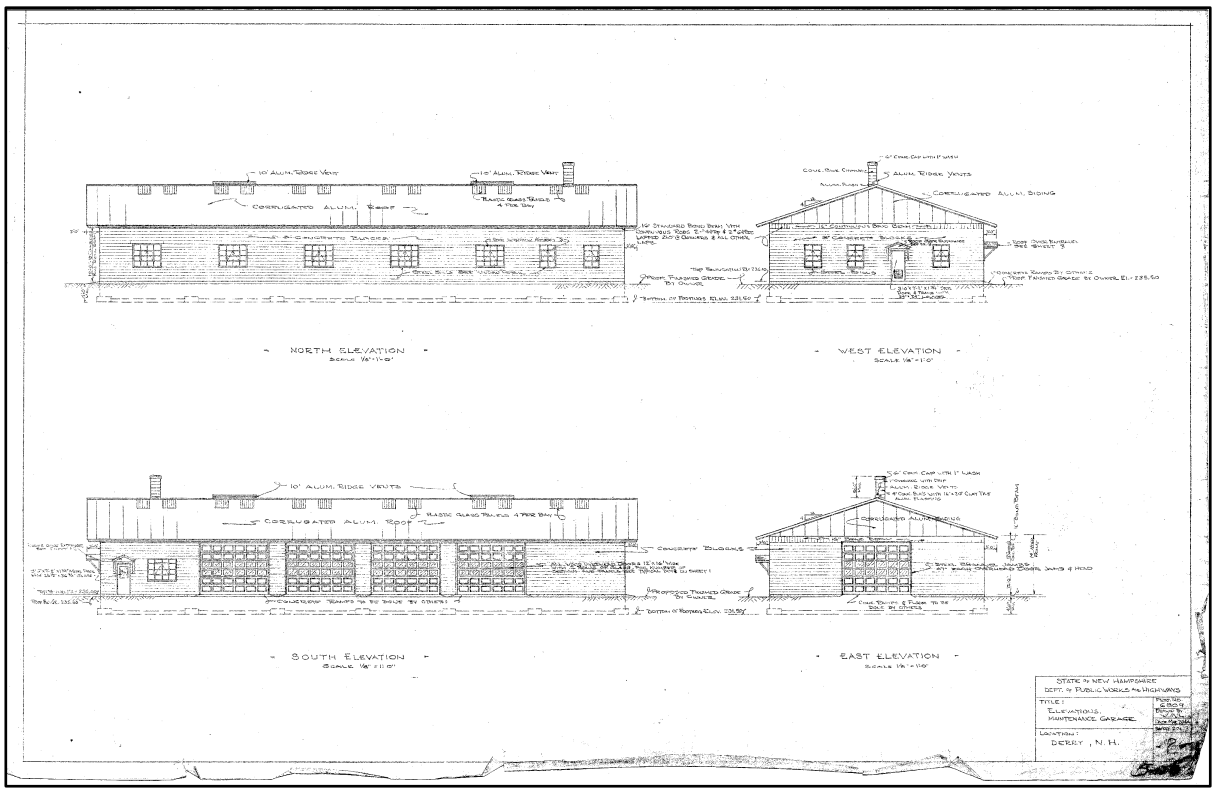
Original Building, now District 3 Office, prior to addition (file photo)

District 3 Office, Gilford (current view)

The 1960s: Standardization

The availability of federal funding resulted in the construction of a number of buildings beginning in the 1960s that were larger than typical district patrol sheds of the day. These included Interstate Patrol Sheds located near the Interstates and buildings combining District Offices with Satellite Garage Facilities. Both of these building types had three or more equipment bays and supported maintenance repairs as well as administrative activities. The buildings were designed by the New Hampshire Department of Public Works and Highways (NHPWH) and built by contract labor. Bill Lyons of the NHPWH prepared an early design that was modified for later buildings.[40] As the Interstate sections were completed, the roads became the responsibility of the nearby corresponding Division. For example, Interstate 93 from Tilton to Plymouth became the responsibility of Division 3. The first part of the road from Tilton to Rt. 104 in New Hampton opened on or about July 1, 1964. In the fall the road was open to Ashland.

The basic Interstate Patrol Shed building was either a Stran-Steel or Butler 50' x 120' steel structure with additional sections constructed of concrete block. Interstate Patrol Sheds were constructed in various locations including off Interstate 93 in Derry (528), Canterbury (525), New Hampton (324), and in Warner (526) and Enfield (224) off Interstate 89. A similar "Belt Line Maintenance Building" was erected in Manchester (527). Other buildings with similar designs were constructed as District Offices and/or Satellite Garage Facilities including Swanzey, Enfield (224), Twin Mountain, Franconia (124), and Wakefield (312). The erection of these facilities began about 1963 and continued for about four years.



Drawing for Derry Maintenance Garage 528, March 1964 (Drawn by W.M.L. – Bill Lyons)

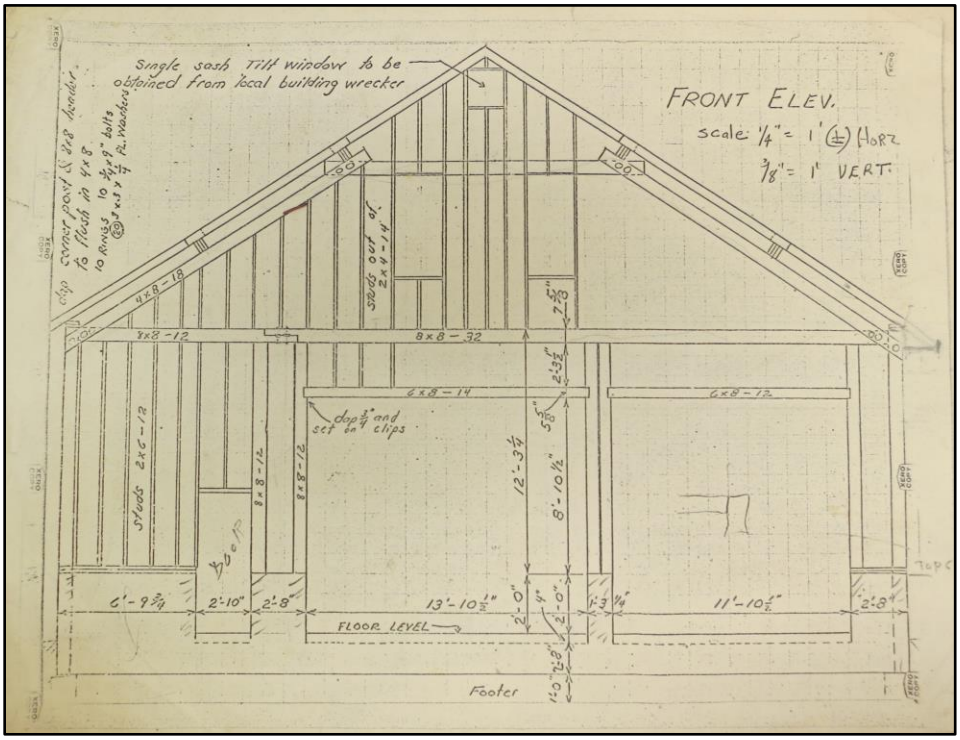
[40] Information from Lee Belanger, long time DOT employee, 2019.

The smaller patrol shed buildings being constructed throughout the state during the same period also began to follow fairly standard designs. These buildings were almost always constructed by state force labor rather than outside contractors. During the 1960s more patrol sheds were constructed in the districts than at any other time. These new patrol shed buildings included garage bays to shelter equipment and usually office space and areas for the crews.

The design of the patrol sheds sometimes reflected the specific needs of the district. In a small district, a single bay garage might be sufficient. For example, in District 3 small 24' x 48' patrol sheds with a single garage bay and just large enough for a four-man crew were constructed in 1969 in Tamworth and Tuftonboro. The design did not seem to be repeated in other areas. Both buildings saw 1981 additions to accommodate work space and the proper storage of equipment.

Tuftonboro 311 (1969 at left; 1981 addition at right) (file photo)

More often, districts across the state shared designs. The patrol shed headquarters built in 1968-1969 in Orford, Westmoreland, Bedford, Raymond, Kingston, Lee and Gorham were all based on the same standard design. In each case the 40' x 60' building had two 12' high overhead garage doors on its gablefront – one was 12 feet wide and the other was 14 feet wide. Each of the garage doors had two glazed panels. More often than not the pouring of the concrete foundation was done by an outside contractor. The prefab roof trusses (29 plus two gable end trusses) were obtained from a nearby lumber yard as was the novelty siding. One or two windows for the front gable could be purchased new or salvaged from an older building. The following sketch is found in files in every District Office. This design, with slight modifications to the size of the garage doors, continued to be used throughout the state in the late 1960s and early 1970s. Nearly every one of these patrol shed headquarters later saw the addition of a shed addition along one side to accommodate office space, crew quarters and provide additional storage.



Sketch for typical 1960s Patrol Shed

This building in Bedford was typical of the late 1960s design. The fuel shed to the right is a later addition. The building was removed for airport access and is no longer extant.

Bedford 511 (file photo)

As of 1971, Division 2 in the northern part of the state was still providing living quarters for seven patrolmen and their families. All of the buildings were described as old and outdated and likely not meeting the standards for decent, safe and sanitary housing. At the time Division Engineer Paul Laflam recommended that the State should continue to maintain living quarters for patrolmen in the four Notches. He recommended that the existing camps be torn down and replaced with modern, simple 3-bedroom houses. This does not appear to ever have been done.[41]

In the 1970s the economic recession meant limited funding for maintenance facilities and Divisions had to become even more resourceful to stretch resources. Correspondence from an Assistant Division Engineer in Division 4 to R. A. Hogan, Maintenance Engineer in 1972 details some of the creative planning that took place at one district.

> Dear Sir:
>
> Mr. Claude Samuelson, South Main Street, Franklin, N.H. has agreed to buy the Sundial Barn for $1200.00.
>
> If we can have this money to construct a new salt shed, we would like to sell at this price. This would allow us to buy the basic materials for a 500-ton salt shed. This would eliminate the storing of salt in the patrol shed, and then we could extend it so that we could get a truck inside with a plow on.
>
> Very truly yours,
>
> R.G. Heath
>
> Asst. Div. Engineer

In the 1970s the Department of Public Works and Highways developed a master plan that called for expanding patrol sections throughout the state to provide for more efficient maintenance operations, less overhead, and greater uniformity in the quality and quantity standards. Various factors resulted in changes in the location of patrol sheds and district boundaries and some consolidation occurred in the mid-20th century. Radio equipped units facilitated the dispatching of equipment, men, and materials to trouble spots so that a given patrol section could handle a larger area of responsibility. Patrol sections could be expanded from 35 to 40 miles to approximately 50 to 60 miles. The construction of new highways also had an impact on the maintenance needs of the lesser state roads, bringing new traffic patterns and new volumes of traffic to older areas that had previously had minimal requirements.

[41] Memo from Paul Laflam to R.A. Hogan, September 7, 1971.

As many of the older patrol headquarters facilities were in poor condition, in the 1970s officials took a new look to insure that new or replacement headquarters would be built at locations to effectively meet needs in the most efficient manner, rather than in the somewhat haphazard way that characterized early siting. During this time the maintenance system also transitioned from a patrol system to so-called "gang maintenance". Implementation of the long range plan was viewed as a gradual process, depending in part on attrition and retirement. Overall, the plan was to reduce the total number of sections. In 1974 the Department proposed to reduce the number of patrol sections from 110 to approximately 85 over the next six to eight years.[42]

As a result of the reorganization in the 1970s and 1980s there are numerous examples of old patrol buildings being eliminated and most often, sold to the town. Patrol sheds in Lyme and Warren were eliminated and sold in 1974. Danbury Patrol Shed 409 was sold to the town in 1976. In Haverhill, White's Garage on the east side of Rt. 10 in Blackmount Village was sold to Rodney Aldrich in 1977. The following year the old shed on Parker Street in Canaan was sold. The Gonic shed was sold to the City of Rochester in 1983.

To replace aging facilities, over twenty new patrol shed buildings were constructed throughout the state in the 1970s as well as additional support buildings. Many of the patrol headquarters buildings were 50' x 60' and followed the same general plan with two garage doors on the gablefront. This building constructed for Charlestown 401 in 1974 was typical of the then standard design.

Charlestown 401 shortly after construction (1974) (file photo)

A building combining District Office and Garage was constructed at Enfield in 1972 (a later addition dates to 1990). In Durham a new administration office building for Division 6 was constructed with a grant from the Economic Development Administration. It was dedicated on October 25, 1979 and named the Homer Richardson Building in honor of the former Division

[42] Letter from R.A. Hogan, State Maintenance Engineer to Representative William F. Kidder, May 20, 1974 [District 2 files].

Engineer and State Maintenance Engineer. A similar building had recently been constructed for Division 1 in Lancaster. All of these buildings were designed by the Public Works Division.

District 1 Headquarters, Lancaster (current view)

Developments Since 1980

In the early 1980s the number of divisions was reduced once again, from seven to the present (2019) six. As a result of this change, Twin Mountain no longer serves as a district office.

Highway construction also impacted maintenance facilities. The completion of Interstate 93 through Franconia Notch in the early 1980s resulted in the loss of a three-bay garage and salt shed. As a result, two additional garage bays were constructed on the west end of the Franconia 124 patrol shed (Butter Hill) and a new salt shed at Franconia 116 (Profile Rd./Rt. 18). The garage addition was funded by Federal funds and designed by Nashua architect David Cheever. The salt shed was built by state crews without an architect. In 1991 Pittsburg 101 Upper was constructed due to the construction of NH Rt. 3.

Other environmental concerns such as the need to provide covered storage for salts, the need to collect brine and to minimize groundwater and surface water pollution resulted in new buildings at many patrol shed locations. New buildings also have been constructed in the last thirty years to replace worn structures. In 2009 a new modern headquarters building was constructed for District 5 in Bedford.

Today (2019) the six highway maintenance districts have 12 to 18 individual patrol sections that they manage. Each section (commonly referred to as a “patrol shed”) has roadways they patrol and perform routine highway maintenance on. Each patrol shed routinely patrols the roadways they are responsible for on an as-needed basis – some daily, some weekly and possibly some monthly, at worse. The latter may include cases of seasonal, closed in winter, or summer only maintenance roadways with municipalities performing winter maintenance.

LIST OF ASSOCIATED NHDHR HISTORIC CONTEXTS

- Automobile highways and culture, 1900-present
- State government, 1680-present
- The federal government in NH, 1776-present

ASSOCIATED PROPERTY TYPES

Maintenance Yard

Historically, New Hampshire's patrol shed facilities were typically sited on marginal, left over pieces of land. On the downside, they may have drainage issues or be located perilously close to surface water or wetlands. If lucky, they might include a gravel or sand pit. The acreage of each yard varies considerably depending on how and when it was obtained by the state. There is no typical road orientation or typical complex layout.

No records have been found detailing a whole complex being planned and constructed. Sometimes, a few buildings were constructed shortly after the land was acquired. Usually, a yard includes various structures of different ages with new buildings constructed to accommodate more equipment and/or materials while the original or older buildings are put to new uses. Structures such as salt sheds which are prone to decay are replaced more often.

Meredith 309 (current view)

Maintenance yards usually include a Patrol Shed, which may include garage space, maintenance functions, offices, etc., as well as salt and sand sheds, other storage buildings, spreader ranks and sometimes fuel sheds. There are often piles of stored materials. The layout for each yard differs. Sometimes but not always, there is some type of security such as a gate to keep out visitors when the facility is closed.

Bridge Maintenance Yards

In addition to the highway maintenance patrol sheds, NHDOT also has less than 20 bridge maintenance facilities. In comparison to the highway maintenance yards, these facilities typically include only a few buildings, primarily serving as dry storage for paint, lumber, bridge forms and other materials as well as garage space for specialized equipment such as a small crane or boomtruck. There is usually a small office/break area as well. The bridge yards also have material piles outside for things such as I-beams, granite, and sheeting. In many cases the bridge facilities are located within or adjacent to highway maintenance yards – examples include New Hampton 703 which is located with patrol shed 324; Allenstown 705 (with 506); Chichester 708 (with 609); Franklin 713B (with 211); New London 713N (with 214); Epping 711 (abuts 608) and Bedford 714B (abuts old 511). Additional facilities are found in Lancaster, Twin Mountain, Sunapee, Newfields, Antrim, Center Ossipee, Rumney, and Portsmouth.

Patrol Sheds of the 1940s and 1950s

As has been discussed, in the first half of the twentieth century, patrol sheds were often pre-existing buildings that happened to be located on the land rented or acquired by the State. There is little or no information available on purpose-built patrol sheds constructed prior to the 1960s nor was there a standard shed type. It is assumed that these buildings were constructed by the Highway Maintenance Districts. A date of construction can only be inferred based on deeds, aerial photographs, USGS maps or random notes in District files. Despite the lack of substantive archival documentation, some similarities in the buildings constructed emerge and some general observations can be made from the sheds that may be useful when early buildings are encountered in the field. Often when new modern patrol sheds were constructed beginning in the 1960s, the earlier buildings remained on-site and were used as storage.

The patrol sheds that were constructed on State land in the 1940s and 1950s were often rambling, single-story, wood-frame buildings that did not seem to follow any standard plan but were designed using barns and similar outbuildings as their template.

Salem 514 Patrol Shed (c.1945, not extant)

In Salem, land was purchased on Shadow Lake Road in November 1943 and within a few years there were three buildings on the property – the patrol shed containing an office and garage, another storage building and a salt shed.

Salem 514 Storage Building (left) and Patrol Shed (right)

Salem 514 Storage Building

As constructed, the Salem buildings were set on concrete foundations and clad in novelty siding. The modest, utilitarian buildings were designed with extensive storage and large openings for moving equipment, vehicles and materials. These photos of the buildings before their removal provide considerable information on early patrol shed design.[43]

Salem 514 Storage Building

[43] O'Shea and Benjamin-Ma, 2016.

Nearby, the mid 20th century patrol buildings at Londonderry 512 display a similar massing and openings although most of the original novelty siding is now covered in vinyl siding and the historic door openings contain modern overhead units. The addition of a shed along one side is a common alteration. Although the early history of Londonderry 512 is not known, it does appear to share some similarities with Salem.

Londonderry 512 (current view)

Londonderry 512 (current view)

Only on the side elevation is the original novelty siding still evident.

Londonderry 512 (current view)

Another patrol shed building at Goffstown, reportedly dating to the 1950s, displays the same high-posted gablefront with vehicle bay and pedestrian entry seen at Londonderry.

Goffstown 507 (c.1950) (file photo)

Other small patrol sheds with a single storage bay and limited space tucked into a gable-fronted building include Bow 505 and Sandwich 305, both of which are believed to date to the 1940s or 1950s.

Bow 505 c.1940 (current view)

Sandwich 305 (current view)

Larger gablefront structures with two oversized doors include buildings that once stood in Thornton and Warner.

old Thornton 3 (file photo)

old Warner 501 (file photo)

In 2004 the following photos were taken of Chester 513 prior to its demolition for a new patrol shed and salt shed. The photos show a balloon frame shed with a concrete mortared fieldstone foundation. The building was supported with sawn heavy timber framing, suggesting that it may have been constructed with some salvaged materials. The land was first leased by the State in 1936 and the building was in place by 1953. The building appears to illustrate the process of adaptation and enlargement that was common to patrol sheds of the period.[44]

Chester 513 (demolished 2004) (file photos)

[44] Information from Jim Downs, District 5 files. See also Joyce McKay, Individual Inventory Form for Chester 513, 2004.

A similar arrangement of buildings is also seen in historic (1964) photographs of the state-owned building in Bedford constructed on land on Rt. 101 that was rented from Gillis French. At the time the land had been leased for at least 25 years, suggesting that the State built the building, perhaps as early as the 1930s.

Early Bedford Patrol Shed
Source: District 5 files

Single-story, shed-roofed buildings appear to have been the standard for early patrol sheds in the Monadnock region. This c.1950 example in Winchester was originally clad in novelty siding.

Winchester 410 c.1950 (2014 view)

The rambling, single-story (c.1950?) building that originally served as a patrol shed in Greenville, later became cold storage.

Greenville 415 (file photo)

The shed-roofed patrol shed sheathed in novelty siding appears to have persisted into the early 1960s as seen in these two examples in Alstead and Franconia.

Alstead 403A (c.1960) (current view)

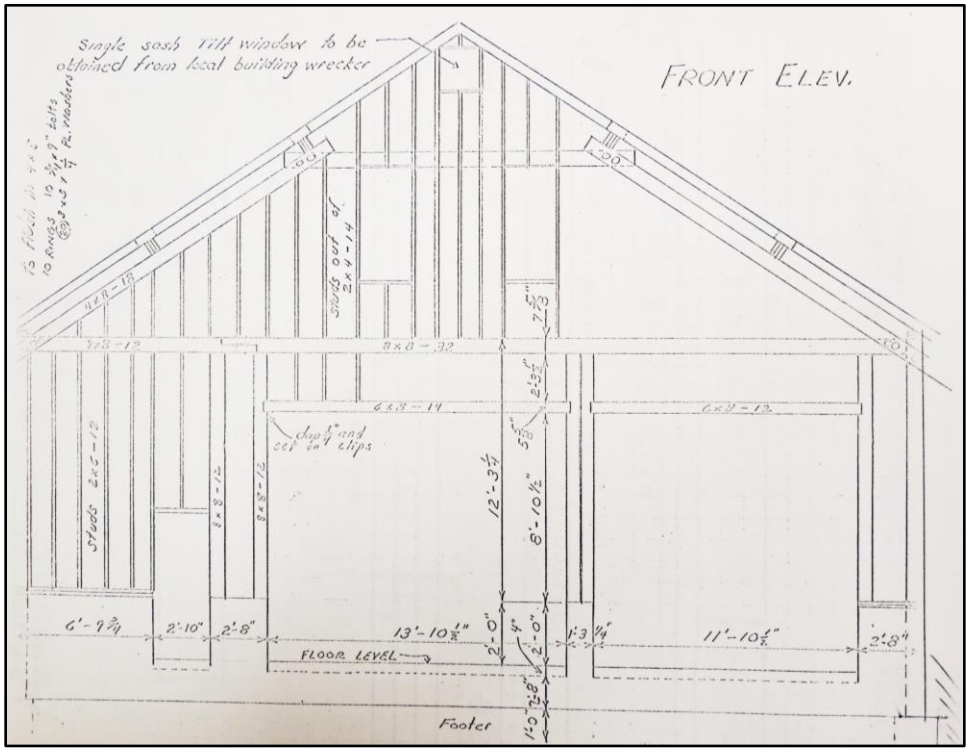
Franconia 116 (c.1960) (current view)

Patrol Sheds of the 1960s and 1970s

In the 1960s the design of the patrol shed headquarters began to be constructed according to standardized designs and practices that extended from one district to another. The concrete foundation floor and partitions were either built with force account labor or by outside contract, whichever was cheaper. The remainder of the building was built by the local crew as time permitted including when they were not engaged in winter highway maintenance. In order to construct the gablefront buildings, lumber, trusses, novelty siding, roofing paper and windows were purchased from local lumber yards.

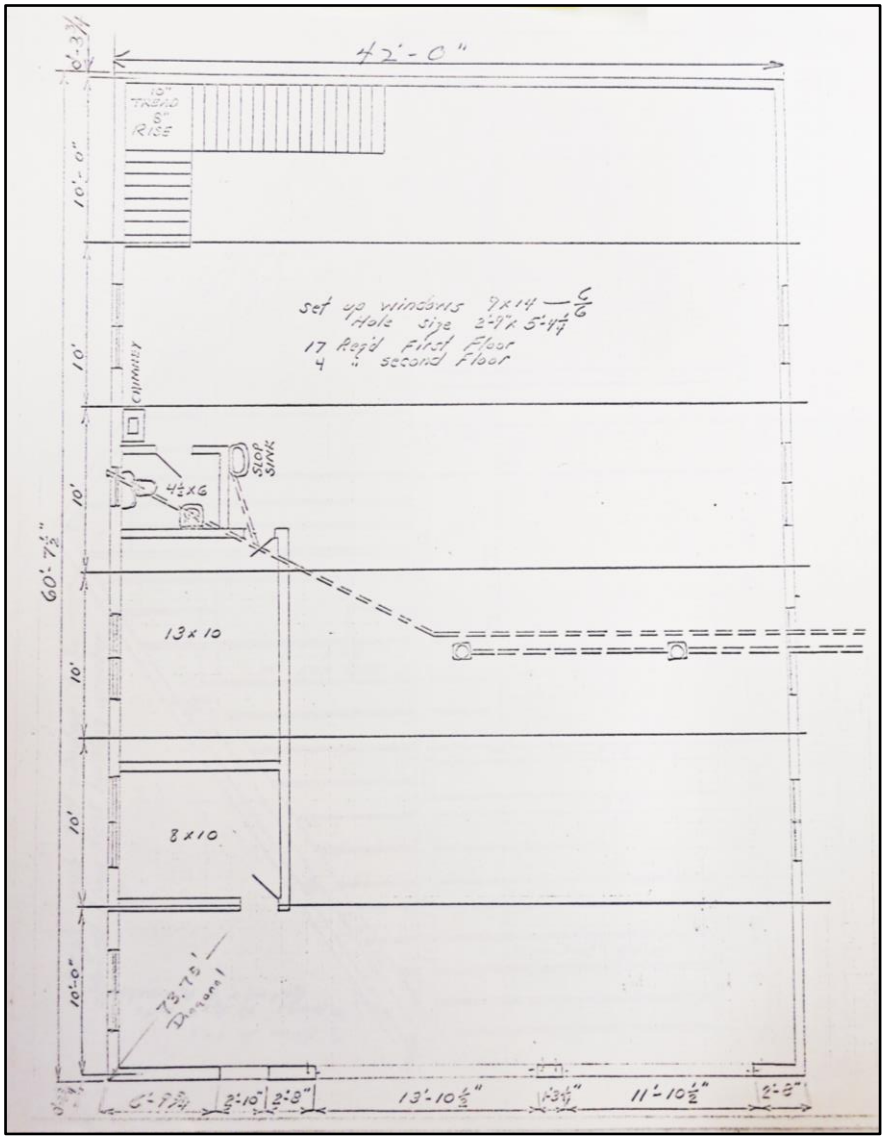
The standard design initially consisted of a building measuring approximately 40' x 60' with two garage bays and a pedestrian entrance on the gablefront. As originally constructed, the buildings were clad in novelty siding and the garage doors each had two glazed panels. One or two double-hung windows punctuated the front gable. The structure consisted of 29 prefab (Fink) trusses with two additional gable end trusses. Among the buildings constructed in the 1960s according to this plan were patrol sheds in Orford, Westmoreland, Bedford, Raymond, Kingston, Lee, Gorham, Epping, Swanzey,

Additional patrol sheds displaying a similar plan were constructed in the early 1970s in Milan, Wentworth, Cornish, Rye and North Hampton.



Epping 608 (1968)

Inside, the patrol shed had a large open area for the storage of equipment with two small rooms set off for office or crew space. There was a small bathroom and upstairs was loft storage.



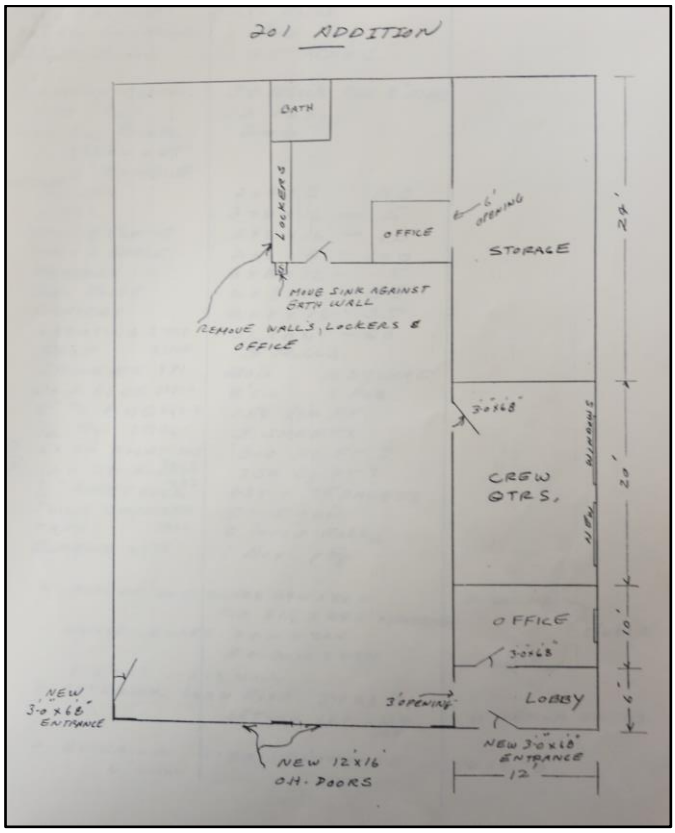
Epping 608 (1968)

Another 40’ x 60’ patrol shed was built in North Hampton in 1970 on land purchased from the Maine National Bank and formerly occupied by Merrill Welding Company. This facility replaced space rented for many years from Earl Spear on Atlantic Avenue in North Hampton across from the town library.

North Hampton 612 (file photo)

Eventually, most of the 1960s patrol sheds saw the addition of bays for additional personnel space. The original Orford 201 building was constructed in 1969 and was 40’ x 60’. In 1988 a 12’ x 60’ addition was constructed for crew quarters and office space. The original pedestrian entrance on the gablefront was moved to the side elevation.

Orford 201 (1969 with later addition at right) (file photo)



Orford Addition 1988 to add crew quarters, storage and office

Bristol 206, originally constructed in the early 1960s is an example of a patrol shed with two major additions. The third truck bay to the right was added in 1984. The addition to the left was somewhat later.

Bristol 206 (current view)

About 1974, 50’ x 60’ patrol sheds were constructed for Charlestown 401 and Hillsborough 404. The design was a slight variation on the earlier 40’ x 60’ prototype but the two garage doors

were of equal size. Charlestown was also constructed with a rooftop cupola. The internal plan remained the same with a large open area for vehicles and equipment and offices and crew space extending along one side.

Charlestown 401

The general form of patrol sheds changed little in the next decade as seen in the Marlow 403 patrol shed, completed in 1984.

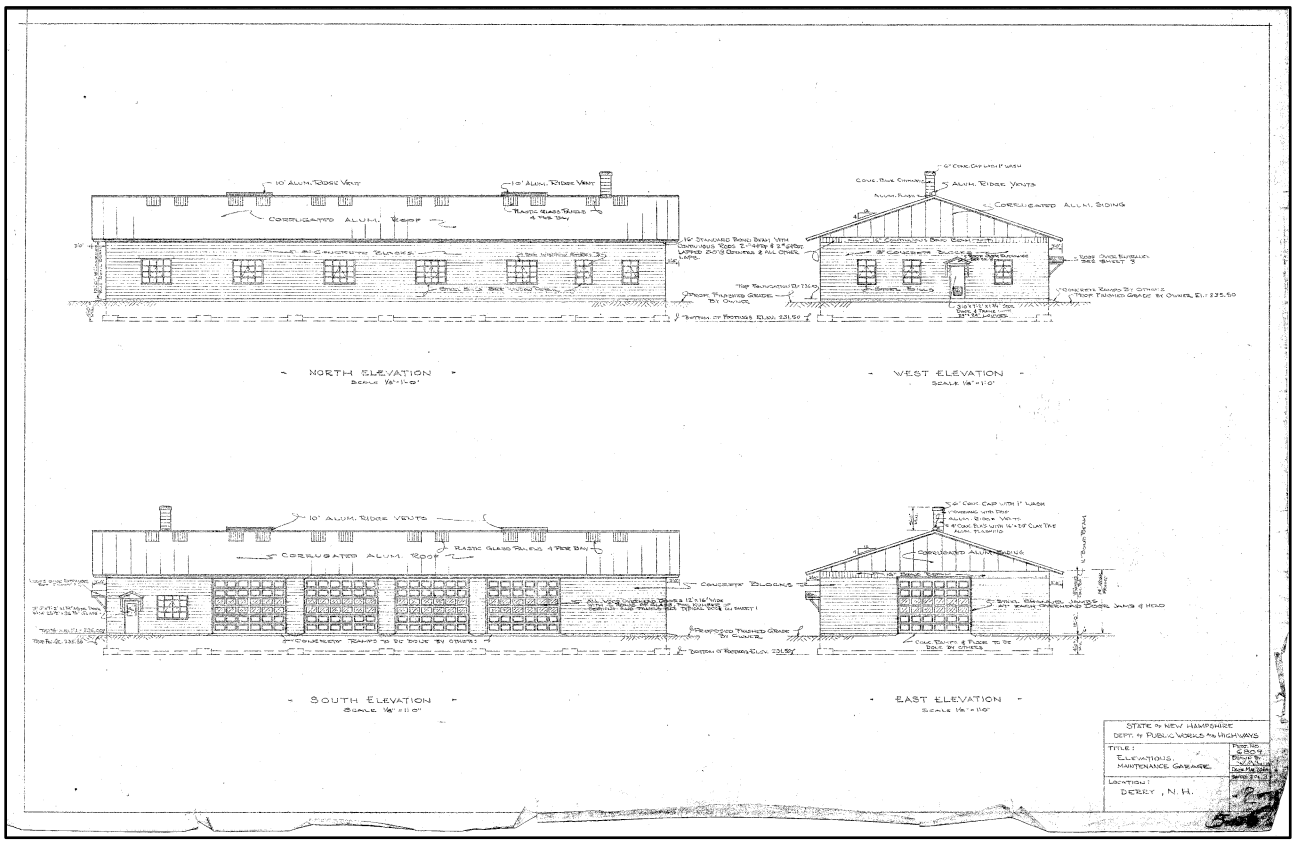
Marlow 403 (current view)

The continued use of the same design persisted for many years. Constructed in 1991, the Pittsburg 101 Upper Shed displays a similar plan although the entrance is tucked under an overhanging roof. As of when this photo was taken in 2014, the building was relatively unchanged and even retained its original novelty wood siding.

Pittsburg 101U (file photo)

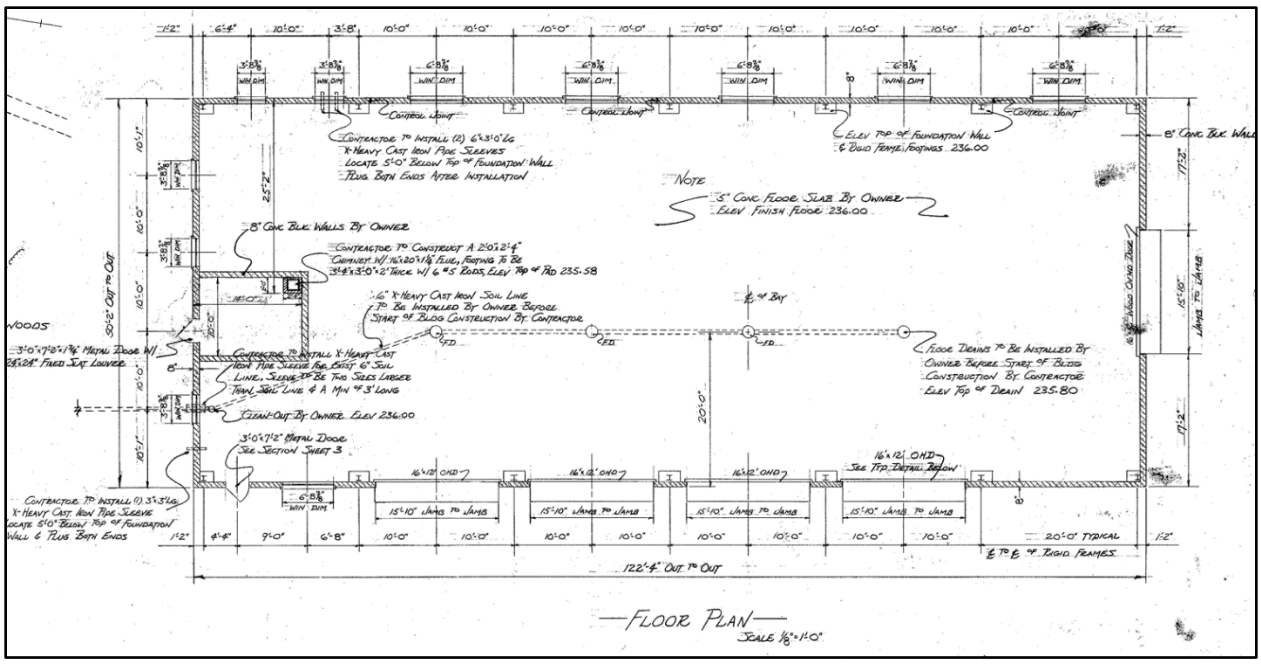
Interstate Patrol Sheds and District Offices/Satellite Garage facilities

In the 1960s the Department of Public Works and Highways developed a prototype that was used to construct Interstate Patrol Sheds and District Offices/Satellite Garage facilities throughout the state, especially in proximity to Interstate Highways. In 1964 William Lyons of PWH prepared the elevations for the garage at Derry. The design with slight variations was constructed between 1964 and 1968.

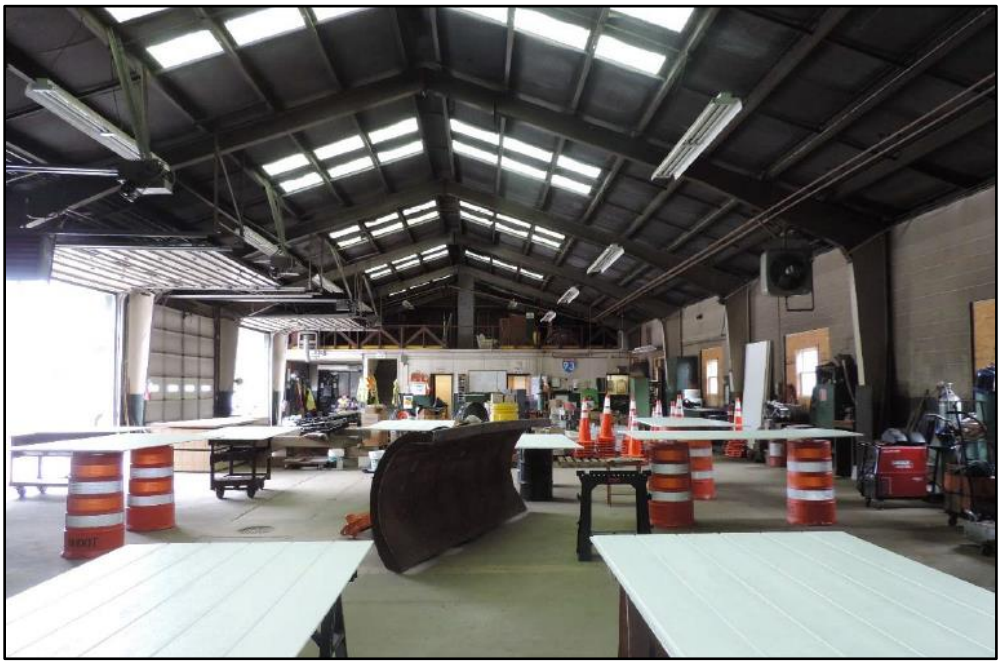


Drawing for Derry Maintenance Garage 528, March 1964 (Drawn by W.M.L. – Bill Lyons)

The 122’ x 40’ building was built on a 5” concrete slab. One end was a Butler or Stan Steel metal building while the office portion at one end had concrete block walls, aluminum siding on the gable ends and steel windows. The building had 16’ eaves and was arranged in 20’ bays. The roof was clad in aluminum with plastic roof panels in each bay on each side of the ridge. There were four overhead doors on the long elevation with an additional on the end.



Floor plan, Derry, 1964

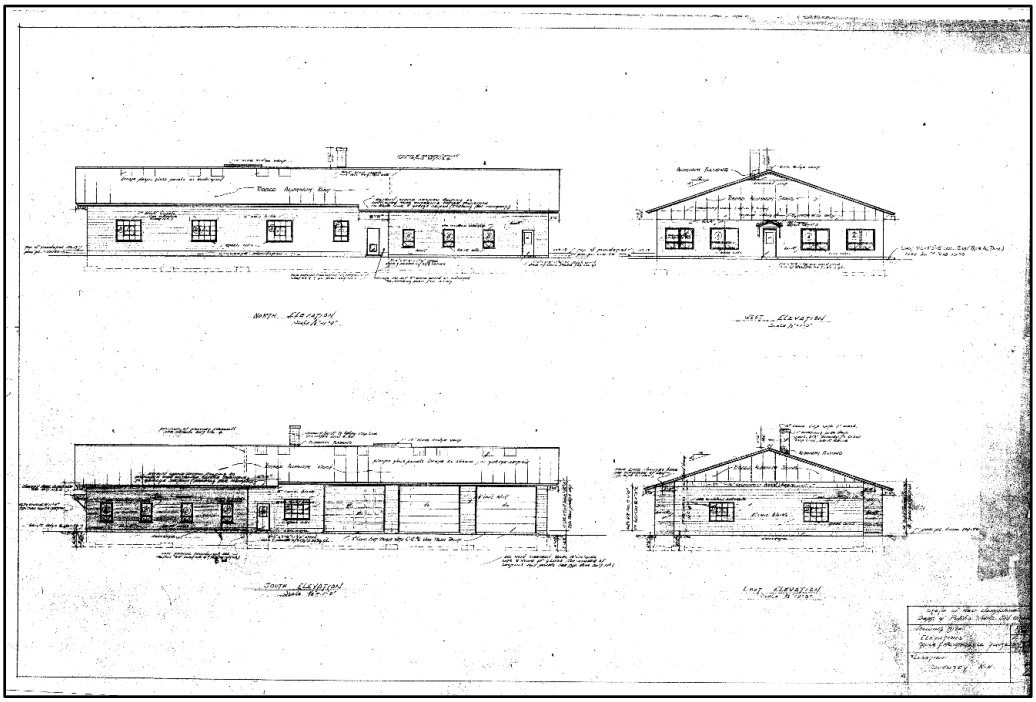


Derry, Interior View, 2016

Warner 526, shortly after construction in 1967 (file photo)

Enfield (current view)

The same design was modified slightly in 1965 for several district headquarters buildings including Swanzey, Enfield and Twin Mountain. These buildings had three maintenance garage bays on the longer elevation and a large office for the district headquarters. The Swanzey and Enfield buildings were later altered by additions. Twin Mountain and Enfield also combined district office and satellite garage facilities.



Maintenance Division 7 Headquarters (now Division 4), Swanzey, 1964
Source: *New Hampshire Highways*, January 1965

District 4 Headquarters, Swanzey (current view)

The building at Twin Mountain has been closed for many years and remains largely unchanged.

Former District 2 Headquarters, Twin Mountain (current view)

Salt and Sand Storage

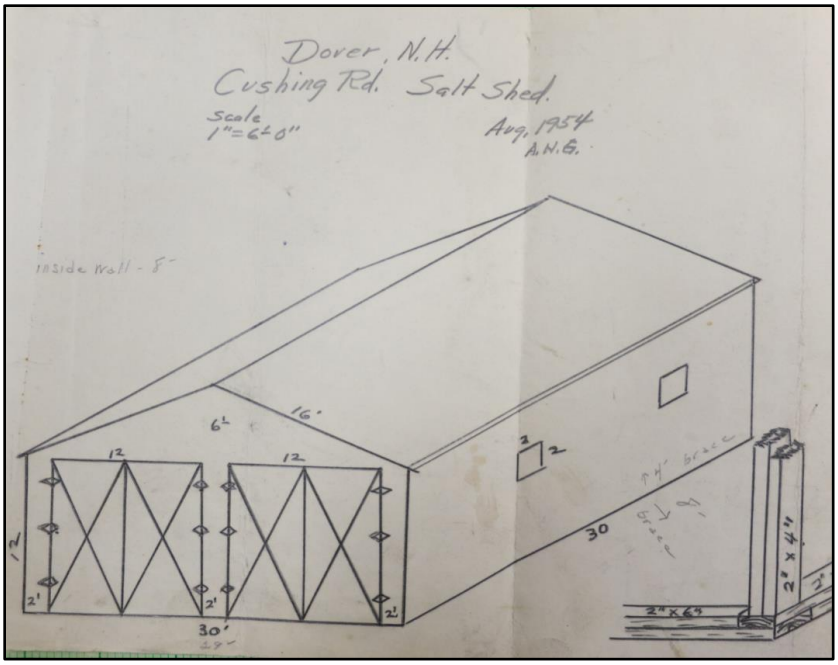
The increased use of salt for deicing beginning in the 1930s and 1940s, necessitated buildings at the maintenance facilities to shelter the material. Salt needs to be covered when it is stored to minimize salty run-off, minimize air transportation, and prevent lumpy salt.

In the early years it is likely that a vacant structure that was designed for another purpose provided suitable cover. In the 1960s when new "modern" patrol sheds were constructed, many earlier patrol sheds were converted to salt sheds. Salt sheds were also often repurposed as sand sheds.

Former New Boston Salt Barn (file photo)

It is not known when the first purpose-built salt sheds were constructed at the patrol sheds. Some notes in District 6 files suggest that this may have occurred in the 1950s in that district. Simple salt sheds were constructed in Northwood in 1953, Dover in 1954 and Barrington in 1958 according to a rough sketch drawn by A.N.G. (A.N. Gagnon). It is not known if Gagnon was a State employee or if the sheds were constructed by state forces. Not surprisingly these all-wood structures did not survive.[45] While they were relatively inexpensive to build, all-wood salt or sand storage structures were prone to deterioration and soon needed replacement.

[45] District 6 files.



Drawing for Salt Shed, Dover by A.N.G. (A.N. Gagnon), 1954

There is generally little or no information documenting the construction of these utilitarian storage buildings. District 2 records indicate that in 1958 a salt barn was under construction on Rt. 103 in Newbury with a capacity of 250 tons. Salt storage structures such as this one, with gable roofs, open fronts and concrete impervious walls were standard for small patrol shed facilities. As the storage quantities required increased, these buildings soon became too small.

Newbury 216 Salt/Sand Shed (current view)

Chichester 503 Shed c.1950 (file photo)

New Hampton (was Ashland)(file photo)

Judging from its concrete impervious walls, this building in Swanzey likely stored salt at some point. It offered a larger capacity than the small gable-roofed structures.

Swanzey (current view)

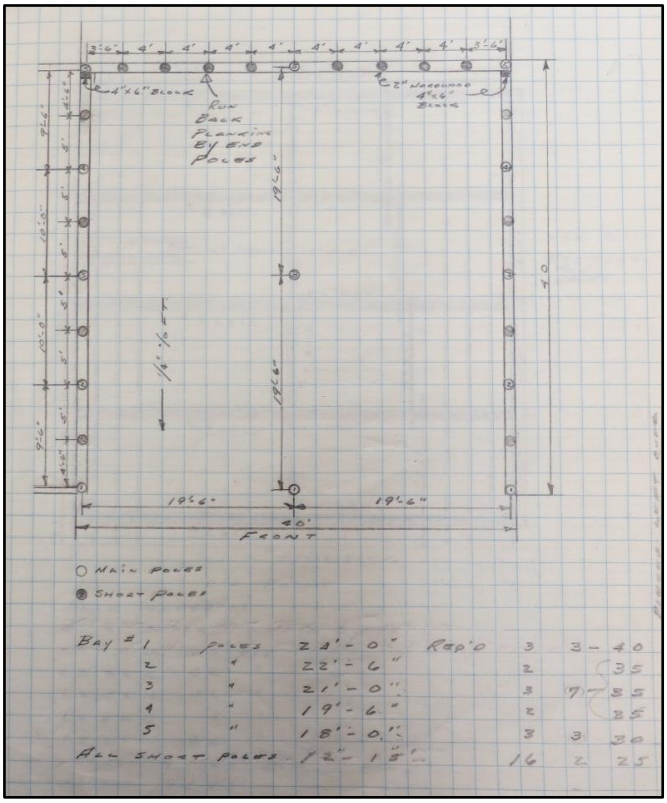
Larger salt barns with gable roofs include this building at Twin Mountain that likely dates to the 1960s and retains its wood siding.

Twin Mountain 111, Salt Storage Building (current view)

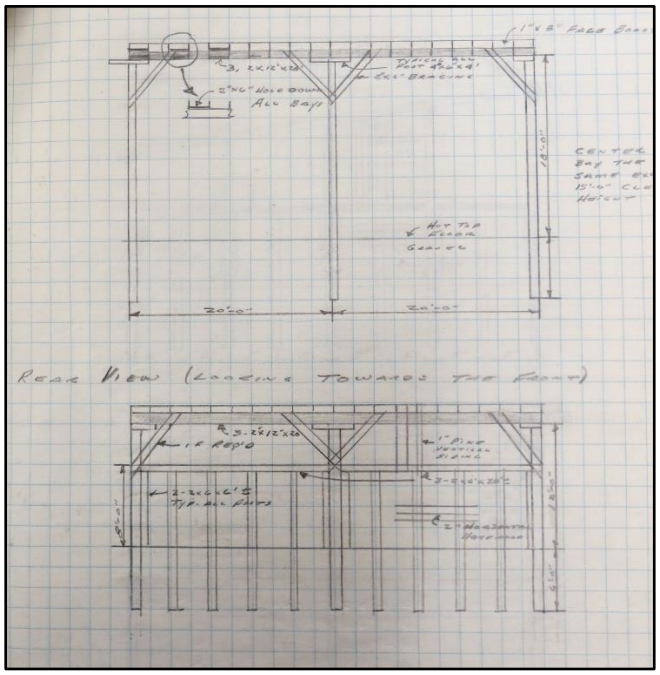
A similar structure at Columbia was constructed in 1971.

Salt Shed Columbia 102, Salt Shed (2010 file photo)

By the 1970s the simple pole barn had become increasingly popular for storing salt, utilizing treated utility poles as seen in this 1970 Bristol structure.



Drawing for Salt Shed, Bristol, Oct. 1970



Drawing for Salt Shed, Bristol, Oct. 1970

Salt Shed, Bristol (current view)

This 50’ x 100’ pole barn style with two storage bays of equal capacity was constructed in Swanzey in 1999. It is equipped with floor drains and a holding tank to capture brine from the stored salt

Swanzey Salt Barn (current view)

In recent years, larger and more sophisticated salt storage buildings have become popular and offer 30’ interior clearance to allow tractor trailers to dump salt inside the building.

Enfield (current view)

Cold Storage

Several of the North Country patrol shed complexes have a similar two-story, shed-roofed building, described in District records as a cold storage building. The age, history and use of these buildings remain unknown at this time although the similarities between the structures make them worthy of further investigation. In each case, the building also has an attached rack to store the salt and spreader attachments installed on the trucks in the winter months for the remainder of the year.

Pinkham Notch Cold Storage (file photo)

Groveton Cold Storage (file photo)

Franconia 116 Cold Storage (file photo)

Spreader Hangers

Canopies on posts that keep salt and sand spreader attachments for trucks off the ground and under cover are found in nearly all patrol shed complexes but are a relatively recent addition.

Newbury (current view)

Living Quarters

A number of maintenance facilities in the north country at one time had a dwelling on the property or a small crew quarters building. These included Crawford and Pinkham Notches. In Franconia Notch, the Lafayette Road Camp was demolished in the 1980s due to the construction of Interstate 93 through the Notch. Another camp was located at Lost River in Woodstock. It does not appear that any of these associated residential structures survive today. In many cases the buildings were located on land leased from the Forest Service.

NATIONAL REGISTER CRITERIA

In order to be eligible for listing on the National Register of Historic Places, historic resources must demonstrate both integrity and significance.

Assessing Integrity

Patrol sheds are by their very nature always changing and evolving to meet new needs. As has been seen, they typically require alterations or replacement because they are undersized for current equipment/vehicle needs, are too small for current personnel needs (inadequate hygiene, crew, and office space) or have structural insufficiencies. In the cases of early patrol sheds, the buildings were often constructed by others and later taken over by the State rather than being originally constructed by Public Works and Highways. These are all factors that must be considered in determining whether patrol sheds and their complexes retain enough integrity of location, design, setting, materials, workmanship, feeling, and association to convey why and when it was significant.

A patrol shed must retain certain physical features to convey its significance. In general, the patrol shed building should remain in its original location and the complex should contain a greater proportion of historic structures than modern structures. The patrol shed should retain its original site including its physical relationship to the adjacent roadway and to support buildings. Despite later additions, the original configuration of the building and fenestration pattern including historic equipment bays and window openings should remain apparent. Buildings with less modern alterations and intrusions will have more ability to convey significance. The survival of original exterior siding and windows are important.

Londonderry 512 showing original novelty siding and later T1-11 (current view)

The state's patrol shed complexes may be eligible for the National Register of Historic Places if they retain integrity and meet at least one of the following National Register criteria:

Criterion A

The patrol sheds and other road maintenance-related buildings constructed by the state are representative of the care and maintenance of the state road network and maintenance system and were a functional supporting element of the expansion of state services and the state's transportation growth and development during the 20th century. Some of the 1960s buildings are also representative of the impact of the Interstate highways and the federal funding available during the period. The structures are tangible reminders of the State's transportation system and are potentially eligible for the National Register under Criterion A.

Criterion B

Patrol shed facilities are not likely to be considered eligible under Criterion B. There is no evidence to suggest that the buildings are associated with individuals significant in local or state history.

Criterion C

Architecturally, the patrol shed complexes built by the state consist of modest, utilitarian structures whose form developed out of function and economic considerations rather than stylistic concerns. Early patrol sheds built by the state had designs inspired by barns and similar outbuildings. By the 1960s the design of the regular patrol sheds became standardized, easily replicated and constructed by state crews all over the state. The larger Interstate Patrol Sheds were based on designs emanating from the New Hampshire Department of Public Works and Highways and were built by outside contractors. They typically consisted of a metal building with an attached concrete block section that contained offices. Where the buildings maintain a high level of historic integrity, particularly in design and materials, they may be significant under Criterion C as a distinctive functional architectural type.

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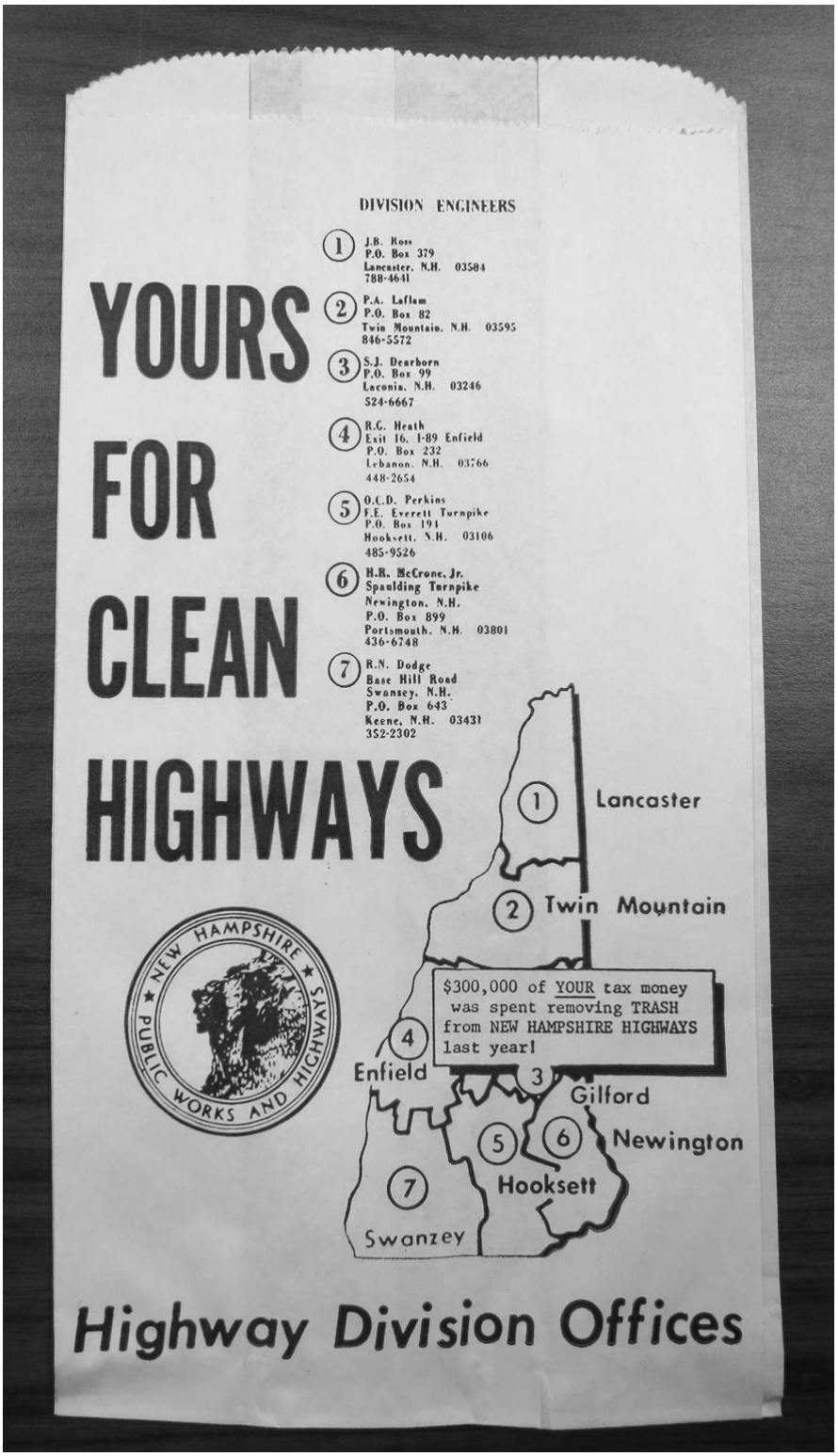
Sign outside District 2 headquarters, Enfield



c.1970 Litter Bag